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ABSTRACT

A study of the nature and function of British Sign Language (BSL) as used in the British deaf community is described. The study examined two hypotheses: (1) that the notion of diglossia applies to the British deaf signing community, and (2) that the low variety of BSL will exploit the visual medium in its grammar to a greater extent than the high variety. Data were collected on the structural features of the language relating to diglossia according to Charles Ferguson's work, and on those areas of grammar sharing special potential for exploitation of the visual medium: spatial modification as a marker of case relations, negatives, and interrogatives. The research population was the entire British signing community of about 40,000. Results show the community has a clear perception of two varieties of BSL, each used under different conditions comparable to high and low forms in diglossia, and that the low form does exploit the visual medium in its grammar to a greater extent. The findings have both theoretical and practical implications. Further support is found for the notion of diglossia and for the relationship of structure and function. In addition, it is proposed that the controversy over the use of signing in schools can now be better informed, the methodology of teaching sign language can be improved and made more explicit, and the expansion of sign language can proceed with more information. Symbols for writing BSL, and a two-page reference list are appended. (MSE)

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Diglossia and British Sign Language

by

Margaret Deuchar

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RELEVANCE TO EDUCATIONAL PRACTICE

Margaret Deuchar's paper investigates variation in the British Sign Language as used in the British deaf community. It shows that the concept of diglossia applies to the British deaf signing community. For American educators, diglossia is a very important concept that has been used to describe bilingual speech communities in which the two languages of the community are related and have separate functions such that one of them, the 'high'language is more prestigious than the other, the 'low' language. Both the linguistic and the social characteristics of sign language diglossia are investigated here.

The findings reported on here have practical implications for the deaf community in the areas of education, sign language teaching and sign language treatment. In British deaf education there is currently a strong controversy about whether or not sign should be used in schools, and decisions are being made on the basis of very little knowledge about its nature. Knowledge of the existence and structure of two functional varieties, such as that provided by this study, would enable such decisions to be better informed. Such knowledge could also benefit the methodology of teaching sign language to hearing people. Students of sign language are often confused by the fact that the variety of sign which they learn in classes (high) is quite different from that used by the deaf in informal conversation (low). Sign language teachers could make the different structures and functions of the two varieties more explicit. Finally, the study can provide information to those involved in sign language treatment. The expansion or 'improvement' of sign language is currently under discussion,

Introduction

The purpose of this study is to describe the nature and function of British Sign Language (BSL) as used in the British deaf community. In particular, the following two hypotheses are investigated: (1) that the notion of diglossia applies to the British deaf signing community; (2) that the 'Low' variety of BSL will exploit the visual medium in its grammar to a greater extent than the 'High' variety.

The first hypothesis suggests that two separate varieties of BSL will be found in the deaf community, a 'High' (H) and a 'Low' (L) variety, fulfilling formal and informal functions respectively.

The second hypothesis is a sub-hypothesis of the first. Assuming that two functional varieties, H and L, are found in the British deaf community, they will differ in their grammar, as is normal in diglossia. The second hypothesis proposes something about the nature of the grammatical differences: that the grammar of L will reflect characteristics of the visual medium to a greater extent than H.

The rationale for the above hypotheses is as follows:

(1) Diglossia has been found in certain specific speech communities (cf. Ferguson 1959). Its defining characteristic is the co-existence in a speech community of two related language varieties with separate functions. The terms 'High' and 'Low', or H and L, are used as convenient labels to refer to the varieties. H is more prestigious than L, and can be considered "superposed" in that it is not native to the community in the way that L is. H is often associated with another speech community

which is or was in a superior position of power in relation to the diglossic community. This other speech community may be represented by an elite in the diglossic community. The members of the elite play social roles which are not easily accessible by other members of the community, and so they tend to command and control H, which is associated with those roles, in a way that the others do not. All members of the community have access to the linguistic and social roles of L, but the elite have much greater access to those of H. H is associated with the elite since it is used in formal situations, which the elite mostly control, and for intergroup communication, in which the elite generally represent the whole community. L, on the other hand, is associated with intragroup communication in informal situations throughout the whole community.

Deaf signing communities generally exist within larger hearing communities. Deafness is a barrier to integration in hearing society, and since hearing society is dominant, the elite in deaf signing communities are those who can integrate into hearing society. These are hearing people who are also part of the deaf signing community, usually through their parents, or those deaf people who have succeeded sufficiently well orally to integrate adequately into hearing society. The hearing/deaf distinction is thus related to an intergroup/intragroup distinction, since the elite of the deaf signing community are those who communicate with and represent the larger hearing community. This social situation is similar to that found in other diglossic communities, but is particularly well established in signing communities because of the linguistic

implications of deafness. Deafness makes access to the linguistic roles of the elite and the hearing community particularly difficult, and by extension, to the social roles also. Under such circumstances one might well expect the deaf community to develop its own system of communication for intragroup purposes, in a medium appropriate to deafness (L sign), while allowing this system to be modified for intergroup communication and for the formal functions associated with the dominant hearing culture (H sign). Diglossia has in fact been attested in the American and Danish signing communities (cf. Stokoe 1969, Hansen 1975), and seems likely to be found in all deaf signing communities within larger hearing communities, including the British deaf community.

(2) Assuming that two functional varieties, H and L, are found in the British deaf community, we may expect their different functions to be reflected in structural differences. The relation between structure and function in language is a controversial issue, but since the visual medium of sign language (or 'sign') is clearly related to the deafness of its users, it is interesting to explore how the H/L, hearing/deaf, intergroup/intragroup and formal/informal dichotomies of function might be related to the oral/visual dichotomy of medium. Both H and L sign will naturally be executed in the visual medium, since that is a defining characteristic of any sign language or variety, but H seems more likely to approximate to English than L. This is because H is used to communicate with or represent the hearing English speaking community, whereas L

does not have to fulfil this function. L is thus likely to be less constrained by English and so freer to exploit the visual medium which deafness imposes.

Procedure

In order to examine the two hypotheses, it was necessary to collect data on both the structure and function of BSL. Diglossia as defined by Ferguson (1959) involves the interaction of both structural and functional criteria. The features relating to the structure or corpus of the language which Ferguson mentions are differences in Grammar, Lexicon and Phonology, while those relating to function or status are differences in what he terms Function, Prestige, Literary Heritage, Acquisition, Standardization and Stability. Data were collected on all these features as they relate to BSL.

Once diglossia had been found to apply to BSL, the area of grammatical difference between H and L was explored in particular detail. This involved examination of those areas of grammar sharing special potential for the exploitation of the visual medium: spatial modification as a marker of case relations, negatives and interrogatives.

The research population was the British deaf signing community, estimated to consist of about 40,000 people, or about one in 1,500 of the entire British population. This community is not geographically isolated from the rest of the British population, but is scattered throughout the country, and may be conceived of as a collection of

sub-communities, each defined by the membership of the local deaf club. The focus for this research was a particular sample of the research population, Reading Deaf Social Club, located in Reading, Berkshire, in central southern England. This club may be considered a representative sample of the signing community in that it is of average size, and similar in facilities, administrative organization, membership and activities to other clubs that I visited. The research was carried out by myself in the role of a participant observer attending the club over a period of nine months.

Data on the function of BSL, from observations and tests, were recorded in notes. Data on structure were recorded in three forms: in notes, on video-tape, and on film. A methodological separation was made between data collected (a) on formal occasions, especially in church services, and (b) in informal conversations. The data from formal settings were labeled H ('High') and those from informal settings, L ('Low') for the purpose of analysis within a diglossic framework. It may be noted that priority was assigned to functional rather than structural criteria, i.e. H and L were identified as the varieties used in formal and informal settings respectively rather than on the basis of their structural or linguistic characteristics. This was particularly convenient in the early stages of the research, when little was known about the structure of BSL. Also, using primarily structural criteria would have led to circularity when comparing structural features of H and L.

For example, if we propose that H has more fingerspelling than L, we must have criteria to separate H from L which are independent of the extent of fingerspelling. If the situation is in fact one of diglossia, then structural and functional criteria will be found to be in agreement, but one set of criteria must first be chosen to see whether this is the case.

Data from the video-tape and film were transcribed with the aid of the Principal Welfare Officer and some of the deaf themselves. Explanations of meaning were sought where necessary so that the data could be translated into English. The transcription system used for the structural data recorded in notes, on film and on video tape, involved the use of English glosses in capital letters for individual signs (e.g. SIGN), and letters followed by dashes for fingerspelled words, t-h-u-s. The English gloss is a mnemonic device representing the sign in that there is a semantic relationship between the gloss and the sign, but this is only a rough guide to the sign's meaning, since sign and English semantics are not isomorphic. A notation following Stokoe et. al. (1976) was also used in transcription where glosses were not sufficient. While the glosses provide semantic and syntactic information about signs, the notation is a kind of phonological representation. It is based on the assumption that each sign has at least three distinctive aspects or parameters: place of articulation (tab), hand configuration (dez), and movement (sig), each of which are represented by a symbol in the notation of any one sign. Following Stokoe et. al. (1976:viii): "If we

use 'T', 'D' and 's' as cover symbols for any possible tab, dez and sig, we can write a sign thus: TD^{s}." The three parameters are conventionally noted in the order T, D, s, but actually must occur simultaneously. A sign is generally analysed as having only one tab, but may have one or two dezes, and several sigs. A sig symbol may also be used as a subscript to the dez symbol to indicate the orientation of the hand. The symbols which I used in transcription are listed in the Appendix. The list consists of symbols taken from Stokoe et. al. (1976) and used in the same way as they are used for American Sign Language (ASL).

Results

There was a clear perception in the British deaf community of two varieties of BSL, each being used under different conditions like H and L in diglossia. The labels for H and L used by hearing adults working with the deaf are various, but is is particularly common for people to distinguish between 'grammatical' signing and 'deaf and dumb' signing. It is not clear whether there are conventional labels used by the deaf themselves to distinguish the two varieties, but I was told that the sign CLEVER would be used to describe an H signer, and that L Sign could be designated by a modification of the sign SIGN (ø5, 5$^{2\sim}$) where the hands would move up and down rather than in circles, thus: ø5, 5$^{\wedge\sim}$. This modified sign also means 'conversation'.

The existence of labels for H and L in the community is evidence for the recognition of these two varieties as distinct. In the British

deaf signing community we have further evidence for such recognition in the sign proficiency requirement for trainee social workers with the deaf. Such trainees have to pass a practical signing test involving the use of sign in two varieties, each with a different kind of person: (1) an 'above average' deaf person, and (2) a deaf person 'without speech'. H is expected for the first, L for the second. This dichotomy would imply that it is the educational level of the addressee which determines the choice of sign variety, rather than the conditions or function as in diglossic communities. This is a fairly common view among members of diglossic communities, but function is in fact crucial in determining the choice of H or L sign, and educational level is only relevant in so far as lack of education prevents the choice of H in a situation where H would otherwise be appropriate.

Function

Function is considered to be one of the most important features of diglossia, and is one of the main criteria for distinguishing between H and L. Ferguson (1959:329) provides a table illustrating specilization of function for H and L, and this can be reproduced with comparable distribution of function for BSL. However, I have no data for some categories, such as "News broadcast". If the news were broadcast in sign on British television we would expect H to be used (as in the U.S.) but news for the deaf on television currently provides only subtitles in English. I also have no data on captions on political cartoons or folk

literatures although both are conceivable and are found (using L) in the ASL community. "Radio 'soap opera'" is not applicable to a visual language (although T.V. soap opera would be) but the categories of writing, e.g. "Personal letters" and "Newspaper editorial etc.", are applicable in so far as H sign can be written like standard English. "Poetry" is also applicable, since H sign can be used to sign English poems. Table 1 is a modification of Ferguson's table, with the labels of some categories changes to correspond more closely to common activities of deaf people. 's' is added to represent H or L sign where applicable.

Table 1
Distribution of function for H and L (BSL)

Function	Language variety H		L	
Sermon in church	x	s[1]		
Instructions to subordinates			x	s
Personal letter	x	s		
Speech in public meeting	x	s		
Lecture	x	s		
Conversation with friends			x	s
News broadcast	x	?		
Radio "soap opera"			x	o
Newspaper editorial etc.	x	s		
Caption on political cartoon			x	?
Poetry	x	s		
Folk literature			x	?

[1] Key: x = diglossic languages in general; s = BSL; o = not applicable to sign language; ? = no BSL data.

It may be noted that Table 1 is similar to that produced by Stokoe (1969:29) to illustrate diglossia in ASL. We see from the table that the distribution of function between the two varieties of BSL paraliels that of the defining languages of diglossia.

Prestige

In a diglossic community H is generally regarded as superior to L. This is clearly true of BSL, and its status is probably reinforced by the association of H with English and the superiority of the dominant hearing/speaking culture. The previously mentioned labels for H and L, 'grammatical' and 'deaf and dumb' signing respectively, point to the prestige of H, which is considered by many to be a linguistic system, while L is seen more as a haphazard, ad hoc, and even crude way of communicating used by the deaf among themselves. As we have also seen, H is sometimes referred to as the system one uses when talking to the 'above average' or 'educated' deaf, while L is said to be appropriate for use with the 'low level' deaf. So while H is associated with educational success or at least with literacy, L often has connotations of ignorance and educational failure.

One indication of the prestige of H in a diglossic community is for the existence of L to be denied. This was the approach in sign language classes which I attended, for H was taught without reference to L. When questions were asked about L usage as it had been observed in the deaf club, the teacher, who used L freely and fluently in conversation with the deaf, usually replied that such usage was incorrect.

The British signing community seems clearly to be one of those cases where "the superiority of H is connected with religion" (Ferguson 1959:330). The Church of England, which initiated welfare for the deaf in its missions to the deaf in the nineteenth century, is probably largely responsible for the maintenance of the superior status of H and its connection with religion. Its chaplains to the deaf have as one of their main aims the improvement of the sign language, and they are highly respected by the deaf as authorities. It may be because of the influence of the Church that hearing people in general are accepted as authorities on sign language, both H and L.

Literary heritage

For the British deaf community, like the American deaf community (cf. Stokoe 1969:30) the written literature of H is the body of English literature. If H is considered equivalent to English, this matches Ferguson's feature in that: "The body of literature may...be in continuous production in another speech community in which H serves as the standard variety of the language" (Ferguson 1959:331). As Stokoe (1969:30) points out, "written English is as accessible to the educated signer as to the native speaker - given equal educational opportunities".

Acquisition

In the defining languages, L is learned as a mother tongue, while H is taught in formal education. For BSL, L may be considered the mother

or native tongue, although only about 10 percent of deaf children (those having deaf parents) are likely to be exposed to L sign from birth. The deaf children of hearing parents may be exposed to H sign if the parents learn it, but it is more common in Britain for parents to follow the oral approach and use no sign at all. This means that many deaf children acquire sign from their peers, when they start to go to school.

Most schools for the deaf in Britain frown on the use of sign, but vary in their strictness in discouraging its use. If a deaf child attends a school where sign is strictly prohibited, or attends a hearing school, he or she may not be exposed to sign until after leaving school as a teenager. Reading Deaf Club has some members who have only learned sign fully since joining the club as young adults. This does not seem to prevent them from progressing to full competence, and raises interesting questions for the critical period hypothesis, according to which acquisition of language must be completed by puberty to be fully successful (cf. e.g. Lenneberg 1967). Stokoe (1969:31) claims that even if sign is learned late in life, it will still be true that "The speaker is at home in L to a degree he almost never achieves in H" (Ferguson 1959:331).

H sign is not taught in formal education so explicitly as in the defining languages. Great emphasis is placed on the teaching of English in British schools for the deaf, but it is general policy to do this via oral methods and not use sign, either H or L. But because of the close link between H sign and English, and the fact that H and L share the same lexicon, deaf people who have become sufficiently competent in

English often learn to adapt their L sign to H syntax, and so command H also. A few schools are now conducting experiments in "Total Communication", involving the simultaneous use of signing and speech, and here the H variety is used and thus acquired by the children in a formal setting.

"The grammatical structure of L is learned without explicit discussion of grammatical concept ; the grammar of H is learned in terms of 'rules' and 'norms' to be imitated" (Ferguson 1959:331). Deaf children learn the grammar of H as the grammar of English, with their attention being explicitly drawn to its rules. They never learn any rules for L; the most they learn about it from their teachers is that it is ungrammatical and lacking in rules.

Ferguson points out that the difference in acquisition patterns for H and L is crucial for maintaining a separation of function between the two varieties. H is unlikely to replace L for all functions unless it is acquired like L. In the case of sign it seems particularly unlikely that H would replace L, since H is constrained by a spoken language and is thus less free to exploit the visual medium than L.

Standardization

The term 'standardization' here refers to the extent to which there is a codified norm. In diglossic communities H is codified to an extent that L is not. The most clearly codified aspect of BSL is its lexicon, and samples of this are to be found in a few sign language manuals. The

British Deaf Association is currently producing a sign language dictionary which will be more comprehensive. Since the lexicon of BSL is largely shared by H and L, it might seem that H and L are equally well codified at the lexical level. However, sign manuals generally represent what their writers consider to be the norm, and there is more lexical variation in L than H.

There is little information in the sign language manuals as to how signs should be combined, although they generally assume that the English order should be followed (as in H). However, Sutcliffe (1971:16) advocates simplifying one's language with those deaf who cannot understand complex language. He says that the style of a telegram with its "slightly ungrammatical form" may be used where this is necessary for clarity. It is interesting to note that such recommendations are based on lack of explicit recognition of the distinction between H and L, and yet allude precisely to that distinction.

Thus the lexicon of L is codified to a lesser extent than that of H, and the grammar of L is not codified at all, except in so far as it is referred to as being deviant from H and in particular, ungrammatical and simplified.

Stability

Diglossia is noted for its stability and persistence over time. It seems likely to be found in most signing communities which exist within a dominant hearing culture. H serves as a way of communicating with

the hearing world and is symbolic of those institutions of hearing culture which are replicated in the deaf culture (e.g. church, school). L, on the other hand, is primarily a means of intragroup communication and a symbol of what is specific to the deaf subculture. As long as deaf people continue to be distinguished from hearing people by the nature of their handicap and by their identification with deaf social organizations, diglossia seems likely to persist.

Ferguson (1959:332) recognizes, however, that "communicative tensions" may arise, and suggests that these may be resolved "by the use of relatively uncodified, unstable, intermediate forms of the language...and repeated borrowing of vocabulary items from H to L". Woodward (1973) suggests that in the American signing community, such intermediate varieties may be referred to as "Pidgin Sign English". Woodward and Markowicz (1975) also suggest that Pidgin Sign English may have the function of maintaining the cultural boundaries of the deaf community. If so, this would be a factor contributing to the stability of a deaf diglossic community.

In BSL, H sign forms are in fact often borrowed into L, particularly by fingerspelling, and syntactically intermediate forms are also found. The existence of forms intermediate between H and L raises the question for BSL, as well as other diglossic communities, of whether or not H and L are really distinct, or whether they should be seen as a continuum, as Woodward (1973) suggests for ASL (cf. 1,321). However, we should not

over-emphasize structural or strictly linguistic criteria, as the fact remains that H and L are perceived as distinct by the community and are assigned to different functions. As Hymes says (1972:289) when discussing the notion of sociolinguistic interference:

> the objective linguistic differences are secondary, and do not tell the story. What must be known is the attitudes toward the differences, the functional role assigned to them, the use made of them.

Lexicon

In diglossic communities most of the lexicon is shared, and this is true of the two varieties of BSL: in fact, the H variety has been created by taking signs from the lexicon of L and imposing an English-like syntax on them. H also includes several signs without L equivalents which have been created for particular purposes by those working with the deaf, especially clergy. (CHRISTIAN, HOLY, may be examples of those specially created.) In addition, H has more fingerspelled loans from English than L. L has signs which do not have parallels in H because of their association with an informal context, such as expletives, and the signs FANTASTIC and FANCY (as in 'to fancy someone'). L also allows more illustrative miming, in the sense of gestures which are outside the conventional sign system, but used with it for pictorial illustration.

The lexical differences mentioned can be explained by the different functions of the two varieties, but in addition:

> a striking feature of diglossia is the existence of many paired items, one H one L, referring to fairly common concepts

> frequently used in both H and L, where the range of meaning of the two items is roughly the same, and the use of one or the other immediately stamps the utterance or written sequence as H or L (Ferguson 1959:334).

We find two main types of paired items in BSL: (1) a fingerspelled word in H as a corresponding sign or signs in L; and (2) a compound sign in H has a corresponding simply sign in L. Examples of (1) (with the H item listed first in each pair are: v-e-r-d-i-c-t versus DISCUSS-AGREE, i-n-q-u-e-s-t vs. COURT-INQUIRY, p-r-e-g-n-a-n-t vs. PREGNANT, t-r-a-g-i-c vs. TRAGIC. Examples of (2) are: MISTAKE+BAD vs. BAD for 'wrong', THINK+HOLD vs. REMEMBER for 'remember', ONE+NOW vs. NOW for 'today'.

Phonology

Ferguson (1959:335-336) makes two generalizations about the relationship between the phonology of H and that of L. The first is that:

> The sound systems of H and L constitute a single phonological structure of which the L phonology is the basic system and the divergent features of H phonology are either a subsystem or a parasystem.

In BSL, H and L seem to have the same phonemic inventory, as represented by the list of symbols for writing BSL (see Appendix). However, H can be considered to have divergent features in that it includes much more fingerspelling than L, and the fingerspelling system is only partially compatible with the phonological system of the rest of the sign language. Out of 400 signs and fingerspelled words taken from each of H and L (film data), the ratio of signs to

fingerspelled words was 263:137 (about 2:1) in H, and 362:38 (about 9:1) in L. Fingerspelling in L occurs mainly for names and English loans at the lexical level, and not for grammatical morphemes such as articles, the copula or prepositions as in H. So on grounds of both frequency and extent of use we may claim that fingerspelling is a divergent feature of H phonology in particular (cf. Stokoe 1969 for a similar conclusion with regard to ASL.)

Another divergent feature of H phonology seems to be the use of a lip pattern representing English words during the articulation of signs. This lip pattern is often accompanied by speech. In L we find that speech is not used, but there is often some lip pattern, the extent of its use varying from signer to signer. Sometimes the lip pattern in L seems to correspond to English glosses for signs as they are made, but sometimes it does not.

A third way in which the phonology of H might be said to differ from that of L is that it incorporates more redundancy. This may be true of formal language or formal registers in general, but a further explanation might be that H is less easily comprehensible to deaf people because they have not acquired it natively and often have limited competence in it even after formal education.

H generally has slower, larger, and more deliberate movements than L, with clearer transitions. This has the effect of increasing the clarity of individual signs and making them more visible to larger audiences. The average rate of articulation of signs in L is about two

per second, whereas it is only between one and one and a half in H. In addition, whereas in H signs are similar to their citation forms (as determined by what people will demonstrate when asked for a sign, or what is taught in sign classes), in L there is often some reduction or modification. (For more details see Deuchar 1978b:4.1.)

Ferguson's (1959:336) second generalization about phonology in diglossia is the following: "If 'pure' H items have phonemes not found in 'pure' L items, L phonemes frequently substitute for these in oral use of H and regularly replace them in tatsamas" (learned borrowings). It is not clear to me exactly how this generalization applies to BSL, except in so far as fingerspelled words may be considered to be "pure" H items having phonemes not found in "pure" L items. These H phonemes are minimized in L by the abbreviation of fingerspelled words (e.g. J-n-s-n for Jensen in the film data, and O-x, for Oxford) and we can say that L phonemes are actually substituted when abbreviation is made to a single letter whose formation is compatible with the basic phonological system. This happens, for example, when c (ØL$^{\text{B}}$) is signed instead of c-l-u-b in L, as I often observed, or in the film data where h alone ($\overline{\text{B}}_{\text{q}}B^{\text{X}}$) is signed for h-a-m. The manual alphabet letters 'c' and 'h' are among those which fit into the basic phonological system found elsewhere in L.

Grammar

Ferguson states (1959:333) that "one of the most striking differences between H and L...is in the grammatical structure." H and L sign show clear grammatical differences: H generally follows the syntax of English, while L is quite divergent from English, and has features which seem to reflect its development as a visual language. The following is a consideration of those areas of grammar which seem to allow exploitation of the visual medium, which are thus relevant to hypothesis (2).

Spatial modification

This is a device for disambiguating the case roles associated with a limited set of verbs, including GIVE, EXPLAIN, ASK, SAY, SEE, BEAT and MOCK. These verbs have in common the semantic notion of "transference" (cf. Edge and Herrmann 1977:144), either in the sense of something transferred from source to goal, as in GIVE and EXPLAIN something to someone, ASK (posing a question to someone), SAY something to someone, and SEE (involving movement of the eyes towards a goal); or else in the sense of action transferred from agent to patient, as in BEAT and MOCK. Spatial modification is egocentric in that the signer is the location for the first person, whether agent or patient, source or goal; and direction of movement and and orientation in relation to the signer serve to disambiguate case roles. For a first person agent or source, movement is away from the signer towards a second or third

person or goal, while for a first person patient or goal, movement and orientation are towards the signer. If there is no first person argument, then the signer will 'represent' a second or third person, usually in the agent or source role, with direction and orientation being away from the signer.

Spatial modification involves 'directionality' and may also involve 'reversibility'. Directionality refers to the possibility for case roles of a verb to be indicated by the direction of the movement of the hand, while reversibility refers to the possibility for case roles to be indicated by the orientation of the hands in the verb (cf. Fischer and Gough 1978). In BSL (L), GIVE and EXPLAIN are directional, while ASK, SAY, SEE, MOCK and BEAT are both directional and reversible. The alternative realization of these verbs according to direction of movement and orientation are as follows:

GIVE: $OB_a\,B_a^{\perp}$ (direction away from signer) as in 'I give to you' versus $OB_a\,B_a^{\top}$ (direction towards signer) as in 'You give to me';

EXPLAIN: $\emptyset 5_{\top}\,5_{\top}^{\circ\perp}$ (direction away from signer) as in 'I explain to you' versus $\emptyset 5_{\top}\,5_{\top}^{\circ\top}$ (direction towards signer) as in 'You explain to me;

ASK: $\smile F_{\perp}^{\times\perp}$ (direction and orientation away from signer) as in 'I ask you' versus $\smile F_{\top}^{\times\top}$ (direction and orientation towards signer) as in 'You ask me';

SAY: $\smile G_{\perp}^{\times\perp}$ (direction and orientation away from signer) as in 'I say to you' versus $\smile G^{\times\top}$ (direction and orientation towards signer) as in 'You say to me';

SEE $\text{AG}_{\perp}^{\perp\perp}$ (direction and orientation away from signer) as in 'I see you" versus $\text{AG}_{\top}^{\top\top}$ (direction and orientation towards signer) as in 'You see me';

MOCK $\overline{5}_{\perp}\ 5_{\perp}^{\perp\perp}$ (direction and orientation away from signer) as in 'I mock you' versus $\overline{5}_{\top}\ 5_{\top}^{\top\top}$ (direction and orientation towards signer) as in 'You mock me';

BEAT $G_{\perp}\ G_{\perp}^{\perp\perp}$ (direction and orientation away from signer) as in 'I beat you' versus $G_{\top}G_{\top}^{\top\top}$ (direction and orientation towards signer) as in 'You beat me'.

In GIVE and EXPLAIN a change in case roles is reflected by a change in direction of movement; in the other verbs it is reflected by a change in direction and orientation. Direction, and orientation where applicable, are away from the signer as source or agent, towards the signer as patient or goal.

Directional verbs seem always to reflect case relations in their movement in both H and L. Reversible verbs, however, seem to use orientation consistently to reflect case relations only in L. It is only in L that spatial modification is used consistently and uniquely as a marker of case relations. This generalization is supported by the results of a modification in H and L, based on all occurrences of the verbs GIVE, ASK, SAY and SEE in the film data. Each verb was classified according to whether it shared spatial modification, whether this was the unique way of marking case, and if not, whether there were other possible means. Other means included: order for H (since L does not seem to have a

basic order) semantic plausibility and context for L. (For description of these means see Deuchar 1978a, or 1978b, which also includes further details of the entire study.) The results are presented in Table 2:

Table 2

Case-marking in GIVE, ASK, SAY and SEE

	Verbs	Total occurrences	Means of marking case relations: Spatial[1] No.	Spatial %	Spatial uniquely No.	Spatial uniquely %	Other No.	Other %
H	GIVE	4	4	100	0	0	4	100
	ASK	8	8	100	0	0	8	100
	SAY	3	1	33.3	0	0	3	100
	SEE	1	0	0	0	0	1	100
	ALL	16	13	81.2	0	0	16	100
L	GIVE	6	6	100	4	66	2	34
	ASK	4	4	100	1	25	3	75
	SAY	16	15	93.7	10	62.5	5	31.2
	SEE	6	6	100	4	66.7	2	33.3
	ALL	32	31	96.8	21	65.6	10	32.2

[1] Spatial marking was defined for GIVE as directional marking, but for the other verbs, both directional and orientational marking had to be present, since it was found that direction reflected case relations in

all occurrences of all verbs in H and L, but orientation did not necessarily in H.

As Table 2 shows, there is a high degree of spatial marking of case relations in both H and L, with somewhat more in L: 97% versus 81%. However, spatial marking as a unique determiner of case relations was not found at all in H, but in about 66% of the occurrences of the four verbs in L. Therefore, we may conclude that L reflects the visual medium in its marking of case relations to a greater extent than does H. This provides support for hypothesis (2) of this study.

Negatives

Seven main types of sentence negation will be discussed and the labels for these are as follows: (i) Fingerspelled; (ii) CANNOT; (iii) NOT; (iv) NOTHING; (v) Incorporation; (vi) Simultaneous; and (vii) Negation gesture.

(i) Fingerspelled

Fingerspelled negation involves the fingerspelling of English markers of negation: n-o-t, d-o n-o-t, d-o-e-s n-o-t, d-o-n-t, n-o. These appear in the surface structure of H sign in the same way as in English. They do not appear in L sign at all. Examples of H sign sentences containing this kind of negation are:

n-o-t:

NOTICE-BOARD w-a-s n-o-t f-o-r DEAF (film)

'The notice-board was not for the the deaf (club)';

d-o-e-s n-o-t:

I-t d-o-e-s n-o-t WANT a-n-y r-e-m-a-r-k-s o-f MY t-o SHOW h-o-w t-r-a-g-i-c THIS i-s (video)

'It does not need any remarks of mine to show how tragic this is';

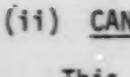
d-o-n-t

d-o-n-t ASK ANY ONE (film);

n-o

FATHER I HAVE SIN ON HEAVEN a-n-d BEFORE YOU a-n-d a-m n-o m-o-r-e USE t-o b-e NAME YOUR s-o-n (video)

"Father, I have sinned against heaven and before you and am no more worthy to be called your son'.

(ii) CANNOT ( ,)

This is the negative of the modal 'can', and is a different sign from CAN ( ). It occurs in both H and L, apparently with more or less equal frequency. In H it occurs in the same position in surface structure as in English, whereas in L it seems to appear at any position in the sentence, and may appear more than once. Examples are:

H:

HE CANNOT HEAR HIMSELF THINK (video)

L:

I CANNOT SAY (film)

CANNOT PATIENT CANNOT PATIENT LEAVE HAPPY CANNOT (film)

'They can't be patient, leave well alone and be happy'.

(iii) NOT (ØB⊥B⊥$\overset{\cdot}{\eta}$, ØB⊥$\overset{z}{\eta}$, occasionally ØG^{x})

This sign is usually translated by the English word 'not'. It occurs in both H and L, but with a different distribution and frequency.

In H it is more frequent than in L, and occurs (a) in declaratives and (b) in imperatives. In declaratives, NOT is an alternative to n-o-t, occurring as in English, and sometimes also as in archaic English, following the main verb:

as in English:

WE HAVE STUPID TALK THING WHICH WE SHOULD NOT t-o HAVE WORK

"We have done those things which we ought not to have done';

as in Biblical English:

HE h-e i-s a-n HERE h-i-r-e-l-i-n-g a-n-d CARE NOT f-o-r t-h-e SHEEP (film)

'He is a hireling and cares not for the sheep'

In imperatives in H, NOT is equivalent to d-o-n-t with which it appears to be in free variation, and an example is:

NOT (ØG^{Z}) GO FIRST t SECOND ON RIGHT (film)

'Don't take the first but the second on the right'.

We also have NOT after the VP in an imperative approximating to Biblical English, e.g.:

LEAD US NOT IN TEMPTATION (film)

'Lead us not into temptation'.

In L, NOT occurs less frequently than in H, and seems to be used only (a) for emphasis or (b) for imperatives. For emphasis it is found after the verb or both before and after:

FILM KNOW NOT KNOW NOT FILM (film)

"I didn't know about the film'

CRY NOT ($\emptyset G^{z}$) (notes)

'I won't cry'

In imperatives in L, NOT appears before the verb as in H:

NOT TOUCH (film)

"Don't touch'.

(iv) NOTHING ($\emptyset FF^{\partial}$, $\emptyset F^{\partial}$)

This sign is extremely frequent in L, where it is the most common general type of negation, but it is relatively rare in H. In H it can only occur where English would have 'nothing' or 'no', e.g.

t-h-e-:-e HAVE NOTHING r-o-o-t (video)

'these have no root'.

In L, NOTHING is the basic form of negation, and it can occur anywhere in the sentence, which may not have a surface verb. ('Have' or 'be' often seem to have been deleted.) Examples are:

I HERE NOTHING (notes)

'I won't be here'

NOTHING WIN TWO-WEEKS-AGO (notes)

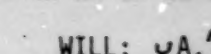
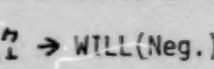
"I didn't win anytning two weeks ago'.

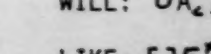
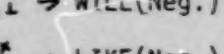
(v) Negative incorporation

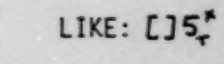
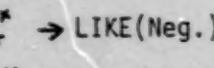
This occurs in a limited set of verbs: the modal WILL and the following stative verbs: LIKE, WANT, BELIEVE, AGREE and KNOW. It is

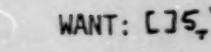
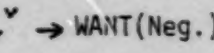
an optional form of the negative, found mostly in L, and only to a very limited extent in H.

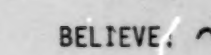
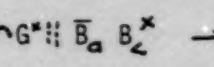
Negative incorporation is the term used to describe the phenomenon whereby the above mentioned signs are negated by an opening and upward (or sometimes downward) movement of the hand at the end of the sign. The use of this term follows Woodward's (1974) designation when describing a similar phenomenon in ASL. Incorporation, and not just juxtaposition of the verb and a negative is seen to take place in that the sig of the verb is modified, and there may be a chnage from one dez to another. The realization of negative incorporation in the verbs with which we are concerned is as follows:

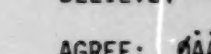
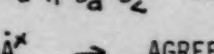
WILL:  → WILL(Neg.): 

LIKE:  → LIKE(Neg.): 

WANT:  → WANT(Neg.): 

BELIEVE:  → BELIEVE(Neg.): 

AGREE:  → AGREE(Neg.): 

KNOW:  → KNOW(Neg.): 

KNOW is a special case because not only is the sig modified, but the dez of the affirmative sign is changed by negative incorporation. The dez for KNOW(Neg.) is B, not A as in KNOW, so that it is open at the beginning of the negated sign, rather than being opened during the sign. Formerly, negation of KNOW may have been achieved by an initial A handshape changing to an open B, as in the process of negative incorporation

found in the verbs discussed above. Then as a result of backwards assimilation during the course of history, final handshape B may have become also the initial handshape for KNOW(Neg.), replacing A.

Examples of sentences including negative incorporating verbs are as follows:

H: MANY KNOW(Neg.) WHAT HE/SHE TALK a-b-o-u-t (video)

'Many people do not know what they are talking about'

L:

LIKE(Neg.) (notes)

'I don't like him'

WANT(Neg.) (notes)

'I don't want it'.

The phenomenon of negative incorporation can be considered specific to the visual medium in that the sig(s) of negation may be added simultaneously in space to the sig(s) of the affirmative signs.

(vi) Simultaneous negation

This is realized by simultaneous headshaking or frowning, often with protruding lips, during a verb sign or equivalent, and sometimes during the whole sentence. (For description of a similar phenomenon in ASL see e.g. Liddell 1976:8, Bellugi and Fischer 1972:193-194.) As an independent means of sentence negation it is found only in L, though it may co-occur with other means of negation in both L and H. There is one example of it occurring as an independent means of negation in

an H context. This is in a video-taped sermon during quoted conversation, so can be explained as a switch to L to represent conversation. The example is (simultaneous negation takes place over segments beneath which 'NEG' appears in transcription):

SAY.....I TRUE

NEG

'He says, "I'm not sure"'.

Other examples, from L, are as follows:

YOU UNDERSTAND (notes)

NEG

'You don't understand'

WILL SAY ME (notes)

NEG

'He won't tell me'

Simultaneous negation may be considered peculiar to the visual medium in that it is realized by simultaneous use of the head and the hands.

(vii) Negation gesture ($\emptyset 55^{a}$, $\emptyset 5^{a}$)

This I have termed 'negation gesture' because it is similar to the hearing gesture which is often described as shrugging one's shoulders, and may accompany negatives in speech. The palms are out and upwards, and it may be made with one hand or two. It occurs as a sole means of sentence negation only in L. It seems likely that its distribution is similar to that of NOTHING in L, but there are not enough examples to be sure. The examples are:

SAME HEAR NOTHING a $\emptyset 55^{a}$ (film)

'I've heard nothing from them: they haven't answered'

SAY ME HE/SHE SAY $\emptyset 5^{a}$ ME YET (film)

NEG

'He or she has not said anything to me yet'.

The relative distribution of the types of negative in H and L was assessed by a quantitative analysis of negatives in the film data. The results of the analysis are presented in Table 3 below.

Table 3

Distribution of negative types in H and L

Type of negative	Frequency			
	H		L	
	No. of occurrences	%	No. of occurrences	%
(i) Fingerspelled	6	40	0	0
(ii) CANNOT	2	13.3	2	7.7
(iii) NOT	7	46.7	3	11.5
(iv) NOTHING	0	0	5	19.2
(v) Incorporation	0	0	12	46.1
(vi) Simultaneous	0	0	2	7.7
(vii) Negation gesture	0	0	2	7.7
Total	15	100	26	100

As the table shows, H has only negative types (i) to (iii), of which fingerspelled negatives and NOT account for over 80 percent. L has all negative types except (i) (fingerspelled), and incorporation is the

most frequent, accounting for over one third of negative sentences (but limited to certain verbs). Next in frequency is NOTHING, just under one fourth, and then NOT, CANNOT, Simultaneous, and Negation gesture.

The grammatical mechanisms for negation therefore differ in H and L. Some types of negation are shared by both varieties, but their distribution and frequency are different. In general, negation in H follows the rules for negation in English, whereas the rules in L are different. L's basic negation type (NOTHING) is not found in H in these data, and L is also to be noted for its use of incorporation and simultaneous negation, neither of which occur in H in the film data.

The use of incorporation and simultaneous negation in L is particularly relevant to hypothesis (2) since these two types of negative are specific to the visual medium in a way that the others are not. The comparative extent to which H and L use medium-specific versus medium-non-specific negation can be made clearer if we rewrite Table 3, collapsing types (v) and (vi) into one category (medium-specific) and types (i) - (iv) and (vii) into another (medium-non-specific). The frequencies would then be as shown in Table 4.

Table 4

Medium-specific and medium-non-specific negation in H and L

Type of negative	Frequency		Total
	H	L	
	No. of occurrences[1]		
Medium-non-specific	15(100)	12(46)	27
Medium-specific	0(0)	14(54)	14
Total	15(100)	26(100)	41

[1] Column percentages are given in parentheses

Chi square value = 12.17; p .001

Table 4 shows that whereas in L, 54 percent of negatives are medium-specific, none are in H. The chi square test shows that the relation of the variables variety and type of negative is significant at the .001 level, thus supporting the conclusion that L exploits the visual medium significantly more than H.

Interrogatives

In spoken languages three common devices for marking Yes/No questions have been noted: (i) intonation; (ii) change in word order; and (iii) the insertion of a special question marker (Langacker 1972:182). In sign language the first is not possible, the second is possible if there is a basic order, and the third is theoretically possible. L does not seem to have a basic order, so cannot use the second, whereas H, with English order, can. A special question marker is not found in BSL, although it is found in ASL (cf. Liddell 1976:7).

The basic way of marking questions in L and other sign language is by facial expression, especially raising of the eyebrows. This may be considered parallel to question intonation in spoken languages in so far as the question marking is superimposed over the sentence. However, the use of facial expression for questions is peculiar to the visual medium because it involves the use of two distinct channels simultaneously,

the face and the hands, and sometimes also a third, the head, or a fourth, the eyes. In spoken language, on the other hand, the voice is the channel used for both segmental and suprasegmental features, and question intonation modifies the acoustic signal. In sign, however, the channels are independent, so that hand movement is not affected by facial expression.

In reporting on the analysis of interrogatives in the BSL data, two kinds of interrogative will be examined: (i) change in sign order; and (ii) facial marking of questions. In general, (i) is found only in H, and (ii) in L. Examples are as follows:

(i) change in sign order

H:

d-o YOU THINK I SHOULD MARRY HER (video)

'Do you think I should marry her?'

(Subject-Aux. inversion and do-support);

HAVE YOU TRUE TRY t-o TALK t-o GOD a-n-d ASK HIM GOD HELP ON YOUR PROBLEM (video)

'Have you really tried to talk to God and ask him for help with your problem?'

(Subject-Aux. inversion);

(ii) facial marking

L:

COME (notes)

?..? (facial marking extends from first to second question mark)

'Did you come here?'

YOU LEARN HARD (notes)

?..?

'Is it hard for you to learn (sign language)?'

HAVE WORK YOU (notes)

?.....?

'Do you have work?'

The last example might be thought to show sign order change, but L sign order is quite different from H, and signs in this order can also be found in affirmative sentences, e.g. KNOW HE, 'he knows', and BAD YOU, 'You're bad'.

In the film data there are twelve instances of interrogative sentences, of which only one is in H, the example being from the sermon:

D-o YOU KNOW WHERE THIS p-l-a-c-e i-s (film)

'Do you know where this place is?'

Here there is Subject-Aux. inversion and Do-support as in English, and there is also (redundantly) facial marking of the question by raised eyebrows. Although this is the only example of a question in H in the film data, the data from video tape and notes support the conclusion that inversion or change in sign order is the usual means of marking questions in H.

Of the eleven instances of interrogatives in L, ten are marked uniquely by facial expression and one by apparent change in word order. The one exception to unique facial marking is as follows:

A-r-e y-o-u a-w-a-y HOLIDAY (film)

'Will you be going away on holiday?'

This was accompanied by head inclination towards the addressee. Although L does not seem to have a basic sign order, this sentence may be considered an instance of change in order because of the large amount of fingerspelling which puts it in the realm of English and H (although the syntax is somewhat deviant from English). The choice of an almost entirely fingerspelled sentence may be explained by the fact that the woman who signed the sentence is about seventy, and considerable use of fingerspelling is common among some old people.

The entire corpus of film data on interrogatives is shown in Appendix B, with details of the type of facial marking involved. A summary of the quantitative analysis appears in Table 5 below.

Table 5

Distribution of types of interrogative in H and L

Type of interrogative	Frequency			
	H		L	
	No.	%	No.	%
(i) Change in order	1[1]	100	1	9.1
(ii) Facial marking uniquely	0	0	10	90.9
Total	1	100	11	100

[1] Note that there was only one interrogative altogether in the H film data, but that the non-film data supports the conclusion that change of order always occurs with interrogatives in H.

The table shows that apart from one exception (discussed above), change in order is found only in H, and unique facial marking only in L. In signalling questions, L thus exploits the visual medium more than H.

Conclusion and Implications

Support has been found for both hypotheses, (1) that the notion of diglossia applies to the British deaf signing community; and (2) that the 'Low' variety of BSL exploits the visual medium in its grammar to a greater extent than the 'High' variety. These findings have both theoretical and practical implications.

A contribution is made to sociolinguistic theory in that further support is found for the notion of diglossia. In addition, the exploitation of the visual medium in L shows that structure and function in language can be related. Knowledge about the possible nature of a visual language enables us to broaden our conception of the domain of linguistics to include sign as well as spoken languages. Information on BSL, which had hitherto been little researched, can be compared with information on other sign languages such as ASL. It can then be used to contribute to the theory of language universals, so that we may discover what characteristics are shared by all languages, regardless of medium, and what are medium-specific.

There are also practical implications for the deaf community in the areas of education, sign language teaching and sign language treatment.

In British deaf education there is currently a raging controversy about whether or not sign should be used in schools, and decisions are being made on the basis of very little knowledge about its nature. Knowledge of the existence and structure of two functional varieties, such as that provided by this study, would enable such decisions to be better informed. Such knowledge could also benefit the methodology of teaching sign language to hearing people. Students of sign language are often confused by the fact that the variety of sign which they learn in classes (H) is quite different from that used by the deaf in informal conversation (L). Sign language teachers could make the different structures and functions of the two varieties more explicit. Finally, the study can provide information to those involved in sign language treatment. The expansion or 'improvement' of sign language is currently under discussion, but cannot be fully successful without reference to the nature of the object of treatment.

APPENDIX

Symbols for writing BSL

(cf. table of symbols for ASL in Stokoe et. al. 1976)

Tab

- ∅ "zero, the neutral place where the hands move, in contrast with all places below"
- ☺ "face or whole head"
- ⌒ "forehead or brow, upper face"
- ⊔ "mid-face, the eye and nose region"
- ∪ "chin, lower face"
- ʒ "cheek, temple, ear side-face"
- π "neck"
- [] "trunk, body from shoulders to hips"
- ↖ "upper arm"
- ✓ "elbow, forearm"
- D "wrist, arm in pronated position"
- ⊼ top of head (added for BSL)

Dez

- A "compact hand, fist"
- B "flat hand"
- 5 "spread hand"

C "curved hand"

E "contracted hand"

F "from spread hand, thumb and index finger touch or cross"

G "index hand"

H "index and second finger, side by side, extended"

I "little finger extended from compact hand"

L "thumb, index finger in right angle"

O "tapered hand; fingers curved and squeezed together over thumb"

V " 'victory' hand; index and second fingers extended and spread apart"

X "hook hand; index finger bent in hook from fist"

Y " 'horns' hand; thumb and little finger spread out and extended from fist"

人 middle finger only extended from closed fist (added for BSL)

Dezes A, B, 5, G, H, and I may also be tabs.

Sig

^ "upward movement"

v "downward movement"

~ "up-and-down movement"

> "rightward movement"

< "leftward movement"

z "side to side movement"

т "movement toward signer"

⊥ "movement away from signer"

⌶ "to-and-fro movement"

ɑ "supinating rotation"

ɒ "pronating rotation"

ω "twisting movement"

∩ "nodding or bending action"

□ "opening action (final dez configuration shown in brackets)"

✱ "closing action (final dez configuration shown in brackets)"

ℒ "wiggling action of fingers"

θ "circular action"

⋗⋖ "convergent action"

× "touch"

⌶ "linking action"

✦ "crossing action"

ⓝ "entering action"

÷ "separate"

ᔕ "interchanging action"

✗ no movement other than that necessary to form the dez from the previous position of the nands (added for BSL)

The sig symbols ∧, ∨, >, <, ⊤, ⊥, ɑ, ɒ can also be used as subscripts to the dez to show orientation.

Additional symbols (D represents dez, s sig)

$\overline{D}\ D$ Left hand dez is below right hand dez

D'D Hands are close together

$D_{,}D$ One hand is behind the other

$\dot{D}$ Part of the dez not usually prominent is extended or used

$\not{D}$ Forearm is prominent in this dez

$\ddot{D}$ Dez is bent

$D^{s\cdot}$ Movement is repeated

$D\ D^{s\sim}$ Action is first by one hand, then the other

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